

DESIGN PANEL NO. 52 3-19-98

PCM DOWNLINK COMPLETION THREAD Atlas DP1 - Shawn Quinn

OVERVIEW

This thread continues the development of the PCM Downlink Gateway interface to the RTPS. The development effort includes the capability to interface to the Space Shuttle main Engine Controllers.

ACTIONS

Investigate if RTPS has the requirement to interface to the 64kbit PCM interface.

ACTIONEE

Shawn Quinn

DUE DATE

4/7/98

STATUS

In work

Approved

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LDB INTERFACE PHASE 2 THREAD Atlas DP1- Shawn Quinn

OVERVIEW

This thread builds on the initial capability to monitor and command the Launch Data Bus (LDB). LDB is the interface between the Orbiter data processing system and all applicable ground facilities for test, checkout, maintenance, preflight, and post-flight phases. In addition, this common software interface provides the RTPS with access to the devices that are attached to the Launch Data Bus when the General Purpose Computers (GPC) are not active on the Launch Data Bus.

HIGHLIGHTS:

- DIO Mode Operations
- Load Register Command
- Arithmetic Command
- EIU Read/Command Operations
- MEC Read/Command Operations
- Critical Command Handling for effected commands
- MMU Capability 1 Operations Dual LDB Gateway Configuration
- DEU Read Commands

ACTIONS

1. SS-P-0002-150 Space Shuttle LDB Software Interface Requirements document specifier:

- a) Arithmetic operators as a TCS 1 for 1
- b) Communications protocols for the SRB MDMs

CLCS does not plan to implement any capability to address either of these functions. Determine what needs to be done to not implement these functions (waives?) or to change SS-P-0002-150.

2. Develop a process for phased validation plan for vehicle interfaces.

ACTIONEE

Laurie Griffin

Steve Altemus

DUE DATE

4/7/98

4/7/98

STATUS

In work

In work

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| 3. How do we create a System Interface Document | Kirk Lougheed | 4/7/98 | In work |
| 4. Investigate LDB recovery approach | Shawn Quinn | 4/7/98 | In work |
| 5. System Engineering must determine the time to recover from a power failure. | Jeff Wheeler | 4/7/98 | In work |

Approved